

# 27449 - Innovation, Growth and Sustainability

## Información del Plan Docente

Academic Year 2017/18

Faculty / School 109 - Facultad de Economía y Empresa

**Degree** 417 - Degree in Economics

**ECTS** 5.0 **Year** 4

Semester Second semester

Subject Type Optional

Module ---

- 1.General information
- 1.1.Introduction
- 1.2. Recommendations to take this course
- 1.3.Context and importance of this course in the degree
- 1.4. Activities and key dates
- 2.Learning goals
- 2.1.Learning goals
- 2.2.Importance of learning goals
- 3. Aims of the course and competences
- 3.1.Aims of the course
- 3.2.Competences
- 4.Assessment (1st and 2nd call)
- 4.1. Assessment tasks (description of tasks, marking system and assessment criteria)
- 5.Methodology, learning tasks, syllabus and resources
- 5.1.Methodological overview
- 5.2.Learning tasks
- 5.3.Syllabus

LESSON 1. INTRODUCTION: INTERACTIONS BETWEEN INNOVATION, ECONOMIC GROWTH AND SUSTAINABILITY



## 27449 - Innovation, Growth and Sustainability

- 1. ECONOMIC GROWTH: Empirical and theoretical panoramical view. The decrease of the capital productivity. Solow residual. Exogenous and endogenous growth models. A practical case: Spain 1960-2007.
- 2. THE CONECTION INNOVATION-ECONOMIC GROWTH: Types of technological change.
- 3. THE CONECTION ECONOMIC GROWTH-SUSTAINABILITY: The limits to the sustainability of the economic growth.
- 4. THE INTERACTION SUSTAINABILITY- ECONOMIC GROWTH- INNOVATION: The need of closing he circle.
- 5. OUTLINE OF THE CONTENT AND THE DEVELOPMENT OF THE COURSE.

#### LESSON 2. MODELS OF ECONOMIC GROWTH WITH ONE SECTOR OF ACCUMULATION

- 1. RAMSEY MODEL WITHOUT TECHNICAL PROGRESS.
- 2. RAMSEY MODEL WITH TECHNICAL PROGRESS.
- 3. AK MODEL.
- 4. AN AK MODEL AS REDUCED FORM OF GROWTH WITH KNOWLEDGE DIFFUSION.
- 5. AN AK MODEL AS REDUCED FORM OF GROWTH WITH PUBLIC INFRASTRUCTURES.

## LESSON 3. MODELS WITH ECONOMIC GROWTH WITH TWO ACCUMULATION SECTORS

- 1. A MODEL OF EXPANSIÓN OF THE VARIETY OF INTERMEDIATE GOODS.
- 2. A MODEL OF EXPANSION OF THE VARIETY OF FINAL GOODS.
- 3. THE IMPORTANCE OF EDUCATION AND HUMAN CAPITAL IN THE ECONOMIC GROWTH PROCESS.
- 4. SCHUMPETERIAN MODELS OF ECONOMIC GROWTH
- 5. GPT: GENERAL PURPOSE TECHNOLOGÍES

### TEMA 4. MODELS OF ECONOMIC GROWTH WITH SUSTAINABILITY IMPLICATIONS

- 1. THE CONCEPTS OF NATURAL CAPITAL AND CIRCULAR ECONOMY.
- 2. ECONOMIC GROWTH WITH RENEVABLE NATURAL RESOURCES.



# 27449 - Innovation, Growth and Sustainability

- 3. ECONOMIC GROWTH WITH NON-RENEVABLE NATURAL RESOURCES.
- 4. ECONOMIC GROWTH AND THE ENVIRONMENT QUALITY.

## LESSON 5. RESEARCH, DEVELOPMENT AND INNOVATION POLICIES

- 1. COMPETITION AND INNOVATION. INSTRUMENTS OF PUBLIC INTERVENTION.
- 2. EXTERNALITIES AND INNOVATION. INSTRUMENTS OF PUBLIC INTERVENTION.
- 3. EDUCATION POLÍCIES.
- 4. PATENT POLÍCIES.

#### **LESSON 6. SUSTAINABILITY POLICIES**

- 1.- DISCUSSION ON THE CONCEPT OF SUSTAINABILITY.
- 2.- RENEVABLE RESOURCES. INSTRUMENTS OF PUBLIC INTERVENTION.
- 3.- NON-RENEVABLE RESOURCES. INSTRUMENTS OF PUBLIC INTERVENTION.
- 4.- ENVIRONMENT QUALITY. INSTRUMENTS OF PUBLIC INTERVENTION.
- 5.4. Course planning and calendar
- 5.5.Bibliography and recommended resources